

CLAIMS



What is claimed is:

1. (ONCE AMENDED) In a computer system, a method for securing access to data, comprising:
  - generating a first message at a first computer system, said first message comprising information corresponding to data, and transmitting said first message to a second computer system;
  - receiving said first message at said second computer system, and generating a key pair comprising an encode key and a decode key for encoding and decoding of said data;
  - generating a second message comprising said encode key, and transmitting said second message to said first computer system; and
  - receiving said second message at said first computer system, wherein said encode key in said second message is used to encode said data.
2. (ONCE AMENDED) The method of claim 1 further comprising:
  - storing said key pair and said information in said first message in a database record.
3. (ONCE AMENDED) The method of claim 1 further comprising:
  - encoding said data using said encode key, and storing said encoded data.

4. (ONCE AMENDED) The method of claim 1 wherein said first computer system comprises at least one client computer system and said second computer system comprises at least one server computer system.

5. (ONCE AMENDED) The method of claim 1 wherein said generating said first message further comprises:  
generating a one way hash function associated with said data; and  
placing said one way hash function, information identifying said data, and user information associated with a user of said data at said first computer system in said first message.

6. (ONCE AMENDED) The method of claim 5 further comprising:  
obtaining said first message at said second computer;  
generating a time stamp and a digital signature representing, said digital time stamp, and said one way hash function in said first message; and  
storing said user information, said information identifying said data, said one way hash function, said one way time stamp and said digital signature.

7. (UNCHANGED) The method of claim 6 wherein said second message further comprises:  
said time stamp, said information identifying said data, and said digital signature in said second message.

8. (ONCE AMENDED) The method of claim 3 further comprising:

providing access to said encoded data by performing steps comprising:

generating a third message at said first computer system, said third message comprising information corresponding to said encoded data, and transmitting said third message to said second computer system;

receiving said third message at said second computer system, and using said information in said third message to retrieve a record corresponding to said encoded data, said record comprising a decode key for decoding said encoded data;

generating a fourth message comprising said decode key, and transmitting said fourth message to said first computer system;

receiving said fourth message at said first computer system, wherein said decode key in said fourth message are utilized to decode said encoded data.

9. (ONCE AMENDED) The method of claim 8 further comprising:  
accessing said encoded data and decoding said encoded data using said decode key.

10. (ONCE AMENDED) The method of claim 8 wherein said third message further comprises:

said information identifying said encoded data, said user information, and said digital signature.

11. (ONCE AMENDED) The method of claim 10 further comprising:  
receiving said third message at said second computer system;  
accessing said corresponding record; and  
verifying said digital signature therein with said received digital  
signature.
12. (ONCE AMENDED) The method of claim 11 further comprising:  
upon proper verification, generating a fourth message comprising  
information identifying said encoded data file and said decode key, and  
transmitting said fourth message to said first computer.
13. (ONCE AMENDED) The method of claim 12 further comprising:  
receiving said fourth message at the first computer;  
accessing said encoded data;  
and using said decode key in said fourth message to decode said  
encoded data.
14. (ONCE AMENDED) The method of claim 11 further comprising:  
upon successful verification, generating a data retrieval time stamp  
and storing said data retrieval time stamp.
15. (ONCE AMENDED) The method of claim 14 further comprising:  
upon unsuccessful verification, generating an attempted data  
retrieval time stamp and storing said attempted data retrieval time stamp.

16. (ONCE AMENDED) In a network system, a method of providing access to encoded data, comprising:

generating a first message at a first computer system, said first message comprising information corresponding to said encoded data, and transmitting said first message to a second computer system;

receiving said first message at said second computer system, and using said information in said first message to retrieve a record corresponding to said encoded data, said record comprising a decode key for decoding said encoded data;

generating a second message comprising said decode key, and transmitting said second message to said first computer system;

receiving said second message at said first computer system, wherein said decode key in said second message are utilized to decode said encoded data.

17. (UNCHANGED) The method of claim 16 further comprising:  
accessing said encoded data and decoding said encoded data using said decode key.

18. (UNCHANGED) The method of claim 16 wherein said first computer system comprises at least one client computer system and said second computer system comprises at least one server computer system.

19. (UNCHANGED) A system for securing access to data, comprising:

a first computer system interconnected to a second computer system via a communication link, wherein said first and said second computer systems are configured to perform steps comprising:

generating a first message at said first computer system, said first message comprising information corresponding to said data, and transmitting said first message to said second computer system;

receiving said first message at said second computer system, and generating a key pair comprising an encode key and a decode key for encoding and decoding of said data;

storing said decode key in a record;

generating a second message comprising said encode key, and transmitting said second message to said first computer system; and

receiving said second message at said first computer system, wherein said encode key in said second message can be used to encode said data to secure access to said data.

20. (UNCHANGED) The system of claim 19, wherein said first computer is further configured to use said encode key to encode said data, and store said encoded data.

21. (UNCHANGED) The system of claim 19, wherein said first and said second computer systems are further configured for providing access to encoded data by performing steps comprising:

generating a third message at said first computer system, said third message including information corresponding to said encoded data, and transmitting said third message to second computer system;

receiving said third message at said second computer system, and using said information in said third message to retrieve a record corresponding to said encoded data, said record including a decode key for decoding said encoded data;

generating a fourth message comprising said decode key, and transmitting said fourth message to said first computer system;

receiving said fourth message at said first computer system, wherein said decode key in said fourth message can be utilized to decode said encoded data.

22. (UNCHANGED) The system of claim 21, wherein said first computer is further configured to access said encode data and use said decode key to decode said encoded data.

23. (NEW) In a computer system, a method for providing secure real time storage and retrieval of file data comprising:

obtaining a secure save command from a user operating a screen element of a first computer system;

executing said secure save command to securely save file data at said first computer system, said executing comprising:

generating a first message at said first computer system, said first message comprising information corresponding to said file data, and transmitting said first message to a second computer system;

receiving said first message at said second computer system and generating a key pair comprising an encode key and a decode key for encoding and decoding of said file data;

generating a second message comprising said encode key and transmitting said second message to said first computer system; and

receiving said second message at said first computer system, wherein said encode key in said second message is used to encode said file data.

24. (NEW) The method of claim 23 wherein said secure save command is performed by a component of a graphical user interface presenting command buttons on a user tool bar on said first computer system.

25. (NEW) The method of claim 23 wherein registration functions are performed on said second computer system while said first computer system and said second computer systems maintain a secure link to each other.

26. (NEW) The method of claim 25 wherein authentication functions are performed on said second computer system while said first computer system and said second computer systems maintain a secure link to each other.

27. (NEW) The method of claim 25 wherein said secure link utilizes cryptographic protocols.



28. (NEW) A method of providing secure real time storage and retrieval of data comprising:

maintaining a secure link between a first computer system and a second computer system while performing registration functions on said second computer;

maintaining said secure link between said first computer system and said second computer system while performing authentication functions on said second computer system, wherein said authentication comprises obtaining an identity for said first computer system;

obtaining a secure save command from a user, wherein said secure save command is embedded into a graphical user interface of said first computer system and said user of said secure save command of said graphical user interface initiates a process comprising the steps of:

generating a first message at said first computer system, said first message comprising information corresponding to said file data and said identity, and transmitting said first message to said second computer system;

receiving said first message at said second computer system and generating an encode key for encoding said file data and generating a decode key for decoding said file data;

generating a second message comprising said encode key, and transmitting said second message to said first computer system;

receiving said second message at said first computer system, wherein said encode key in said second message is utilized to encode said file data,

accessing encoded file data by generating a third message at said first computer system, said third message comprising information corresponding to said encoded file data, and transmitting said third message to said second computer system;

receiving said third message at said second computer system, and using said information in said third message to retrieve a record corresponding to said encoded data, said record comprising a decode key for decoding said encoded data;

generating a fourth message comprising said decode key and said encoded file data, and transmitting said fourth message to said first computer system;

receiving said fourth message at said first computer system, and using said decode key in said fourth message to decode said encoded file data.

29. (NEW) The method of claim 28, wherein said step of generating said first message further comprises:

generating a one way hash function of said file data; and

placing said hash function, information identifying said file data, and user information for a user of said file data at said first computer system in said first message.

30. (NEW) The method of claim 29, further comprising:

obtaining said first message at said second computer;

generating a time stamp, and a digital signature representing said digital time stamp, and said hash function in said first message; and

storing said user information, said information identifying said data, hash function, said time stamp and said digital signature in a database record.

31. (NEW) The method of claim 30 wherein said second message further comprises:

said time stamp, said information identifying said file data, and said digital signature in said second message.

32. (NEW) The method of claim 28 wherein said encoded file data may be stored at a third computer system.